

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1-13. Canceled

14. (Currently Amended) An apparatus for the decomposing fluorine compounds which contain at least one of PFC, HFC, SF₆ and NF₃, said apparatus comprising a single reactor having therein a fluorine compound decomposition catalyst for decomposing said fluorine compounds charged into said reactor in an upstream portion thereof and a harmful compound removing catalyst having a reaction temperature of 650-850°C for the decomposition of at least one of SO₂F₂ and N₂O, formed by said decomposition, charged into said reactor at a portion downstream of where said decomposition catalyst is charged into said reactor; a single heater for heating said catalysts in said reactor; a moisture supplying unit for adding moisture to said fluorine compound supplied to said reactor; an inert gas supplying unit for adding an inert gas as a diluent gas; and an oxygen supplying unit for adding oxygen or an oxygen-containing gas to a gas containing at least one of SO₂F₂ and N₂O formed by decomposition of said fluorine compounds.

15. (Canceled)

16. (Currently Amended) An apparatus for ~~the~~ decomposing fluorine compounds as claimed in claim 14, wherein said harmful compound removing catalyst for the decomposition of at least one of SO_2F_2 and N_2O , contains at least one component selected from Pd, Pt, Cu, Mn, Fe, Co, Rh, Ir and Au, in the form of a metal or an oxide.

17. (Currently Amended) An apparatus for ~~the~~ decomposing fluorine compounds as claimed in claim 14, wherein said harmful compound removing catalyst for the decomposition of at least one of SO_2F_2 and N_2O is selected from a catalyst of Pd and La carried on alumina, a catalyst of Pt and La carried on alumina, a catalyst of Rh and La carried on alumina, a catalyst of Au and La carried on alumina, a catalyst of Ir and La carried on alumina, a catalyst of Pd carried on alumina, a catalyst of Pt carried on alumina, a catalyst of Cu carried on alumina, a catalyst of Mn carried on alumina, a catalyst of Pd and W carried on titania and a catalyst of Co carried on alumina.

18. (Currently Amended) An apparatus for ~~the~~ decomposing fluorine compounds as claimed in claim 14, further comprising a gas scrubbing tower for removing hydrogen fluoride and other water soluble components from a gas discharged from said reactor by contacting said gas with water or an alkaline aqueous solution.

19. (Currently Amended) An apparatus for decomposing fluorine compounds as claimed in ~~according to~~ claim 14, wherein said catalyst for decomposing fluorine compounds includes a combination of aluminum and nickel in the form of an oxide.

20. (Canceled)